

## **Fruit Acreage Survey Specifications**

The specifications for the Fruit Acreage Survey were developed considering the 1993 survey as a starting reference. A major objective for the 2001 survey was to publish data that corresponded to the official estimates for bearing acres. Official estimates are not available for total acres or tree inventories, so this was incorporated into the specifications as an unofficial target. Funding and resources were a prime consideration in designing this survey.

The Fruit Acreage Survey was designed as a multiple frame survey using a list of fruit operations as a sampling universe, including an allowance from the June Area Frame survey to represent orchards not on the list. The list of orchards and vineyards was stratified into small, medium, and large. To insure coverage of each fruit, the large stratum was defined to include operations according to the acreage of individual fruit, and a target coverage of at least half of the state's total for each fruit. The large stratum included any operations meeting one of the following criteria: 100 acres of apples; 50 acres of pears or nectarines; 25 acres of sweet cherries or peaches; or 10 acres of apricots or prunes. This procedure resulted in 550 fruit operations being in the large stratum.

The small stratum was sampled at 50 percent. There were 1,650 small operations surveyed by mail. There were 1,700 medium size operations on the list and all of them were included in the survey. An expansion of the fruit acreage from the area frame (accounting for acreage not represented by the list) accounted for about 14 percent of the state's total acreage.

## **Summarization of Data**

Questionnaires received from growers were reviewed for completeness and key entered in the computer. Data for the entire operation were checked and summarized to a state total. More detailed information was requested for each block that identified the variety, year planted or topworked, acres, and bearing and non-bearing trees in each block. The grower also identified the specific county where the block was located so multiple counties could be reported in the same questionnaire. This detailed information was used to adjust the total information for the operation.

Some operations reported only the total acreage of each fruit and not the detailed block information. The totals were adjusted proportionally to the reported block data. The reference date was January 1, 2001, so plantings made during 2001 were not to be included. Data for 2001 plantings were deleted from the summary.

Operations that could not provide data during the survey period were handled according to their stratum. Reports for the small stratum were expanded to account for all fruit growers in this stratum (approximate expansion factor of 3.2). Data from medium stratum fruit growers were also expanded (approximately 1.4) to account for the nonreporting operations. Data were inputted for nonreporting large operations. The small operations accounted for 6 percent of the state's total fruit acreage, mediums accounted for 32 percent, and large accounted for 62 percent.

Bearing age was a major objective of the survey. Bearing age is a function of many factors including the variety, rootstock, and year planted or topworked and the micro climate of the block. The bearing age was calculated for the 1993 survey based on these factors. The 2001 survey approached the situation differently and requested the orchardist to provide the number of trees that were bearing and nonbearing age for each block. This procedure allowed more direct input from the operators in classifying their acreage and simplified the summarization of the data. Detailed data reported at the block level was utilized to adjust the orchards that reported only total acreage by fruit.

About 75 percent of the state's total acreage was reported in the survey and over half of the state total was reported in the detailed block data. Coverage of each fruit varied, but this amount of raw data provides a very sound basis to estimate the totals. Estimates were rounded to allow representation wherever possible such that the sum of the estimates added to the state total.

A copy of the questionnaire, is in appendix A.

### INTENTIONS:

Orchardists were asked for their intentions to topwork (apples), remove or plant each fruit between January 1, 2001 to December 31, 2001. Positive response was received by less than half of the orchardists that they would make no change or entered a response with a question mark. Most of the responses were in the "unknown category" with comments such as they did not know at this time, depends on the price, depends on financing, depends on the fruit industry's position in the economy and left the question blank.

The following table is the raw data rounded to the nearest 50 acres to illustrate the response of those that did report data. As the data are not expanded and the representation may not accurately reflect the actual situation, data users should evaluate the data considering the unknown factors reported above. The data does represent a contracting apple situation and an expanding sweet cherry and pear acreage. Data reported for the other fruit was not considered stable enough to publish at the district or state level. However, the indication for apricots was to remove about 100 acres and not to replant; nectarine removals was less than 25 acres and intentions to plant was about 100 acres; peach removal rounded to 50 acres with 100 acres to be planted; and the plum and prune growers indicated no change.

**Intentions to Topwork (apples), Remove or Plant Between January 1, 2001 to December 31, 2001**

Fruit	Wenatchee	Yakima Valley	Columbia Basin	All Other Areas	State Total
Apples:					
To be Topworked	400	750	400	100	1,650
To be Removed	1,850	3,050	1,150	50	6,100
To be Planted	700	900	350	50	2,000
Sweet Cherries:					
To be Removed	50	50	*	*	100
To be Planted	600	300	200	*	1,100
All Pears:					
To be Removed	50	150	*	*	200
To be Planted	350	200	*	50	600
Combined 3 Fruits					
To be Removed	1,950	3,250	1,150	50	6,400
To be Planted	1,650	1,400	550	100	3,700

\* Data reported, but less than 25 acres, data rounded to nearest 50 acres.